

Applicants: Richard Axel and Kristin Scott  
Serial No.: 10/081,816  
Filed: February 22, 2002  
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#### **REMARKS**

Claims 57-72 are pending and under examination in the subject application. The Examiner has withdrawn claims 63 and 64 as allegedly directed to an invention that is independent or distinct from the invention originally claimed. Applicants have amended claim 57 in order to correct a typographical error. Applicants have also amended claim 70 and added new claim 73 in order to place claim 70 in proper dependent form. Applicants maintain that the amendment of claims 57 and 70 and the addition of claim 73 raise no issue of new matter. Accordingly, claims 57-73 will be pending in the subject application upon entry of this Amendment.

#### **Objection under 37 C.F.R. 1.75(c)**

The Examiner objected to claim 70 as allegedly improper because a multiple dependent claim may not depend from another multiple dependent claim.

In response, and without conceding the correctness of the Examiner's objection, applicants note that claim 70, as amended, is not a multiple dependent claim. Accordingly, the Examiner's objection thereof is obviated.

#### **Rejection under 35 U.S.C. §101**

The Examiner rejected claims 57-62, 65-69, 71 and 72 under 35 U.S.C. §101, as allegedly drawn to an invention with no apparent or disclosed specific and substantial credible utility.

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Specifically, the Examiner alleges that the instant application does not identify a particular compound or class of compounds that activate Gr63F1 nor does it disclose with specificity the consequence of that activation.

In response, applicants respectfully traverse.

Briefly, the rejected claims provide isolated nucleic acids encoding insect gustatory and odorant receptor proteins and related compositions and methods.

Under 35 U.S.C. §101, "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." Applicants maintain that they have discovered a new and useful invention and are thus entitled to a patent.

Here, the Examiner has erroneously concluded that the nucleic acids of the subject invention, and the receptors encoded thereby, are useless without knowledge of what compounds or class of compounds bind to the receptor or the consequences of that activation. However, without conceding the correctness of the Examiner's remarks, applicants maintain that even without knowing which compounds or class of compounds bind to the claimed receptors, these receptors still bear a use. For example, the receptors can be used to screen for the presence of ligand-receptor pairings. Such screens are described in the specification at, *inter alia*, page 64, lines 22-31, and page 65, lines 10-19. Ligand-insect odorant and gustatory receptor pairings are useful, for example, in

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that they permit the identification of methods for combating ingestion of crops by pest insects. It is stressed that a single use for a claimed invention is sufficient to satisfy the utility requirement. No additional uses need be shown.

**Rejection under 35 U.S.C. §112, First Paragraph**

The Examiner rejected claims 57-62, 65-69, 71 and 72 under 35 U.S.C. §112, first paragraph, as allegedly failing to teach how to use the claimed invention (which applicants understand as an assertion that the specification does not teach a use for the claimed subject matter). The Examiner stated that the reasons for this rejection are the same as those set forth in support of the rejection under 35 U.S.C. §101.

In response, applicants again maintain that a use is taught, for the reasons set forth above, and that the rejected claims satisfy the requirements of 35 U.S.C. §112, first paragraph.

**Summary**


Based on the reasons set forth hereinabove, applicants maintain that the pending claims are in condition for allowance. Accordingly, allowance is respectfully requested.

If a telephone interview would be of assistance in advancing the prosecution of the subject application, applicants' undersigned attorneys invite the Examiner to telephone them at the number provided below.

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No fee is deemed necessary in connection with this Amendment.  
However, if any fee is required, authorization is hereby given to  
charge the amount of such fee to Deposit Account No. 03-3125.

Respectfully submitted,



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